

REMARKS

In the Office Action dated March 30, 2010, the Examiner objected to the drawings under 37 CFR §1.83(a) as not disclosing all of the claimed features; objected to claims 36 and 43-44 under 35 U.S.C. §112, second paragraph, as being indefinite; rejected claims 1, 3-6, 10-11, 15, 21-23, 25-26, 29-30, and 36-37 under 35 U.S.C. §102(b) as being anticipated by *Galloway* (U.S. Patent 4,626,237); rejected claims 16 and 41 under 35 U.S.C. § 103(a) as being unpatentable over *Galloway*; rejected claims 2, 9, and 38-40 under 35 U.S.C. 103(a) as being unpatentable over *Galloway* and further in view of *Collier* (U.S. patent 6,346,069); rejected claims 24, 27-28, and 42-44 under 35 U.S.C. 103(a) as being unpatentable over *Galloway* and further in view of *Pokladnik* (U.S. patent 4,438,817); rejected claims 31-34 and 45 under 35 U.S.C. 103(a) as being unpatentable over *Robertson* (U.S. Patent 5,248,421) and further in view of *Ditria* (U.S. Patent 6,197,095).

Objections to Drawings

Applicant traverses the Examiner's objections to the drawings. Intervening bottoms 33 and pipe sections 23, 24, 25, 26 are shown in Figure 8. See paragraph 53 of the specification.

Objections under 35 U.S.C. §112

Claim 36 has been amended whereby the length of the pipe sections may be varied such as by moving the intervening bottoms as discussed in paragraph 53. See also Figure 8. Claim 43 has been amended to provide antecedent basis for "the transport line." See also paragraph 50 of the specification.

Rejections under 35 U.S.C. §102

Claims 1, 3-6, 10-11, 15, 21-23, 25-26, 29-30, and 36-37 are rejected under 35 U.S.C. §102(b) as being anticipated by *Galloway*. Claim 1 has been amended to distinguish *Galloway*. *Galloway* does not teach a container that is rotationally fixed with respect to the discharge line nor the fluid flowing adjacent the inner wall of the container. Figure 7 of *Galloway*, relied upon by the Examiner, teaches a stationary vessel 14 inside of which rotates a primary rotor 12 having a rotor wall 27 that rotates with respect to the feed nozzles 51. Fluids do not enter the space between primary rotor 12 and container 14. Thus, the fluids of *Galloway* cannot flow adjacent the inner wall of container 14, and primary rotor 12 is not stationary with respect to feed nozzles 51. Further, *Galloway* does not rely upon the feed nozzles 51 for the application of a centrifugal force but instead relies upon the rotation (spinning) of primary rotor 12 whose inner walls create a centrifugal force on the well fluids causing them to flow in accordance with their density. C8/L49-C9/L2. Still further, *Galloway* does not teach a plurality of

delivery lines joined to the container or a plurality of delivery lines joined to the container at different levels in the vertical direction for the separated fluid constituents.

Claims 3-6, 10-11, 15, 21-23, 25-26, 29-30, and 36-37 are dependent from claim 1 and therefore are allowable for the reasons given with respect to claim 1. Further with respect to claim 3, as amended, *Galloway* does not teach a discharge line that extends radially outwards and vertically upwards with the shape of a spiral around a vertical pipe. Further with respect to claim 4, the feed line 62 of *Galloway* does not terminate within center post 25. See delivery lines 41 in Figure 8 of the present application. Further with respect to claim 5, *Galloway* does not teach fluid feed lines extending to each of the pipe sections of a vertical pipe and particularly does not disclose a plurality of pipe sections within a central vertical pipe with fluid feed lines terminating at different sections. The "multiple conduits" are not feed lines. Center post 25 of *Galloway* is not divided into a plurality of pipe sections and the lines extending within center post 25 are outlet lines 46-49. Claims 6, 21, 36, and 37 are dependent from claim 5 and therefore are allowable for the reasons given with respect to claim 5. Further with respect to claim 6, *Galloway* does not teach openings in the vertical pipe in the region of each of the pipe sections. The only arguable openings in center post 25 are the feed nozzles 51 which only open into the upper chamber 40 of rotor 12. Further with respect to claim 10, *Galloway* does not teach a discharge line in the classifier device in the lower section of the container where the discharge line has a number of openings. The discharge lines of 46-49 of *Galloway* are located outside the vessel 14 and do not have a number of openings. A discharge line discharges the feed fluid and not separated constituents. Further with respect to claim 11, as amended, *Galloway* does not teach a blade segment supporting a discharge line. Stationary bars 73 are not blade segments. Further with respect to claim 15, *Galloway* does not teach a bottom end cap 28 having outlet openings. Further with respect to claim 21, it is not seen that *Galloway* teaches level sensors in Figure 8 or at C14/54-61. Further with respect to claim 22, claim 22 is allowable since *Galloway* does not disclose a sensor device disposed in the upper end of the vertical pipe. Further with respect to claim 23, *Galloway* teaches a valve to control the feed-stream flow rate and does not teach a feedback line disposed between the separation device and well. See paragraph 27 of the application. Further with respect to claim 25, as amended, *Galloway* does not teach a frame structure for mounting the components on the separation device subsea. Further with respect to claim 26, *Galloway* does not teach an electrical supply and control unit positioned subsea. *Galloway* is a land based system. Further with respect to claim 29, the housing 14 shown in Figure 7 is not conical shaped. The Examiner states on page 4 of office action that vessel 14 is the container. Further with

respect to claim 30, *Galloway* does not teach a container that is of modular construction. Further with respect to claim 36, *Galloway* does not teach pipe sections that can be varied. Further with respect to claim 37, *Galloway* does not teach fluid feed lines extending to each of the pipe sections of a vertical pipe formed by intervening bottoms and particularly does not disclose fluid feed lines terminating at different sections.

Rejections under 35 U.S.C. § 103(a)

Claims 16 and 41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Galloway*. Claims 16 and 41 are allowable because *Galloway* does not teach a rotary slide valve which allows the amount of fluid constituents passing via the delivery lines to be varied. Also with respect to claim 41, *Galloway* does not teach a multibore connector.

Claims 2, 9, and 38-40 are rejected as being unpatentable over *Galloway* and further in view of *Collier*. Claims 2 and 9 are dependent from claim 1 and are allowable for the reasons given with respect to claim 1. Further with respect to claim 2, as amended, neither cited reference teaches the claimed classifier device, particularly delivery lines extending within the vertical pipe to different vertical levels. Further with respect to claims 2 and 9, Applicant fails to see that outlet lines 76, 78 in Figure 3 of *Collier* have a spiral shape or spiral radially outwards and extend radially upwards as represented by the Examiner. Claims 38-40 are dependent upon claims 1 and 11 and are allowable for the reasons given with respect to those claims. Still further with respect to claims 38-40, *Collier* does not teach holes in blades to accommodate and/or mount a discharge line. See *Collier* at C16/L58-65.

Claims 24, 27-28, and 42-44 are rejected as being unpatentable over *Galloway* and further in view of *Pokladnik*. Claims 24 and 27-28 are dependent from claim 1 and are allowable for the reasons given with respect to claim 1. Further with respect to claim 24, *Pokladnik et al* teaches mounting a separator on a template on the seabed and not as part of a subsea tree. Thus, it would not be obvious to combine the teachings of *Galloway* and *Pokladnik* to teach the claimed invention. Further with respect to claims 27 and 28, the cited prior art does not teach the claimed changeover valve of claim 27 or the bypass pipeline of claim 28. Further the Examiner has expressed the view that it would be obvious to one having ordinary skill in the art at the time the invention was made to include or add some element not disclosed in the cited prior art. Applicant traverses the Examiner's official notice of such unsupported prior art and, motivated by the case of *In Re Ahlert and Kruger*, 165 USPQ 418 (CCPA 1970), applicant hereby challenges the use of unsupported prior art allegedly known by one skilled in the art and asks the Examiner to show support for this unsupported prior art.

Claims 42-44 are dependent upon claims 1, 16, and 41 and are allowable for the reasons stated with respect to these claims. Further with respect to claims 42-44, the Examiner is incorrect in stating that *Galloway* discloses slide valves. Also neither *Galloway* nor *Pokladnik et al* disclose a multibore connector.

Claims 31-34 and 45 are rejected as being unpatentable over *Robertson* in view of *Ditria*. Claims 32-34 and 45 depend from claim 31. Claim 31 distinguishes *Robertson*. *Robertson* teaches a series of progressively decreasing cross-sectional spiral tubes with each tube having an outlet for the removal of the heavier particles that have been separated in a particular spiral tube. *Robertson* does not teach having the well fluids exit the spiral tubes and into the container and then separating the constituents in the container rather than within the series of spiral tubes as taught by *Robertson*. *Ditria et al* is also distinguishable. *Ditria et al* teaches a five stage separation process that includes a liquid-liquid hydrocyclone 44 to remove some produced water and/or to condition the production fluid for entry into a container or vessel 58 where gravitational separation occurs. *Ditria et al* does not teach the internals of vessel 58 or the internal operation of vessel 58. Thus, neither of these cited references teach discharge compartments nor discharge compartments arranged vertically nor discharge compartments arranged vertically in accordance with the densities of the constituents nor each discharge compartment communicating with a discharge pipe.

Claims 32-34 and 45 are allowable as being dependent upon claim 31. Further with respect to claim 32, it would not be obvious to combine *Robertson* with *Ditria* since *Robertson* does not teach that its fluid separator may be operated under water. Further with respect to claim 33, although *Ditria* teaches the reinjection of water at column 9, lines 23-27, *Ditria* does not teach a reinjection tree communicating with the discharge pipes as set forth in claim 33. Further with respect to claim 34, neither reference teaches a slide valve. Further with respect to claim 45, neither reference teaches a slide valve actuated electrically subsea.

Voluntary Amendments

Applicant has made certain voluntary amendments to the claims. Claims 4, 5, 9, 11, 15, 16, and 22 have been made dependent on claim 1 and claim 6 has been made dependent on claim 5 to remove unnecessary limitations in claim 3. Further "the classifier device includes a vertical pipe and" has been inserted in claims 4, 5, 9, 15, 16, and 22 and "includes a vertical pipe" has been inserted in claim 11 to provide antecedent basis for "vertical pipe." Still further claim 43 has been amended to provide antecedent basis for "transport lines." These amendments were voluntary, and

were required for purposes of patentability. Thus Applicants are entitled to the application of the Doctrine of Equivalents under *Festo* with respect to the amended limitations.

CONCLUSIONS

During the course of these remarks, Applicant may have at times referred to particular limitations of the claims that are not shown in the applied prior art. This short-hand approach to discussing the claims should not be construed to mean that the other claimed limitations are not part of the claimed invention. They are as required by law. Consequently, when interpreting the claims, each of the claims should be construed as a whole, and patentability determined in light of this required claim construction. Applicant reserves the right to submit the original claims or any cancelled rejected claims in a continuing application and prosecute those original claims fully without regard to any amendments made to those claims in the present application. Applicant does not give up any scope of the original claims due to the claims amendments or cancellations in the present application.

If the Examiner has any questions or comments regarding this communication, he is invited to contact the undersigned to expedite the resolution of this application.

If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore. If any fee is due for such a petition or should any additional fees be required with respect to this application, the Commissioner is authorized to charge such fees to Deposit Account Number 03-0335 of Cameron International Corporation.

Respectfully submitted,

/David A. Rose/
DAVID A. ROSE
Reg. No. 26,223
CONLEY ROSE, P.C.
P. O. Box 3267
Houston, Texas 77253-3267
(713) 238-8000
ATTORNEY FOR APPLICANT

CAMERON INTERNATIONAL CORPORATION
P. O. Box 1212
Houston, Texas 77251